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CLAIMS

1. A composite aluminium panel comprising two parallel plates and/or sheets secured to the peaks and troughs of a corrugated aluminium stiffener sheet between the parallel plates and/or sheets, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

Mg 1.5 - 6.0

Mn 0.3 - 1.4

Zn 0.4 - 5.0

Fe up to 0.5

Si up to 0.5

Zr up to 0.30

optionally, one or more of Cr 0.05 - 0.30

Ti 0.01 - 0.20

V 0.05 - 0.25

Ag 0.05 - 0.40

Cu up to 0.40

others up to 0.05 each, 0.15 total

Al balance

and having in an H-condition or in the O-condition a ratio of PS/UTS in the range of 0.4 to 0.9 and having good roll formability.

2. A composite aluminium panel according to claim 1, wherein the corrugated aluminium stiffener sheet has a thickness in the range of up to 3.0 mm, and preferably in the range of 0.2 to 1.0 mm.

3. A composite aluminium panel according to claim 1 or 2, wherein the Zn content of the corrugated aluminium stiffener sheet is in the range of 0.4 to 1.2%.

4. A composite aluminium panel according to claim 1 or 2, wherein the Zn content of the corrugated aluminium stiffener sheet is in the range of 3.0 to 4.5%.

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5. A composite aluminium panel according to any one of claims 1 to 3, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

5	Mg	5.0 - 6.0
	Mn	0.6 - 1.2
	Zn	0.4 - 1.5, and preferably 0.4 - 0.9
	Zr	0.05 - 0.25
	Cr	up to 0.3
10	Ti	up to 0.2
	Fe	up to 0.5
	Si	up to 0.5
	Cu	up to 0.4
	Ag	up to 0.4
15	balance Aluminium and inevitable impurities.	

6. A composite aluminium panel in accordance with any one of claims 1 to 5, wherein a cladding is present on at least one side of the surface of the corrugated sheet of the following:

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| 20 | (i) | it is of a higher purity aluminium alloy than said rolled sheet; |
| | (ii) | the cladding is of the Aluminium Association AA1000 series; |
| | (iii) | the cladding is of the Aluminium Association AA6000 series; |
| | (iv) | the cladding is of the Aluminium Association AA4000 series; |
| | (v) | the cladding is of the Aluminium Association AA7000 series. |

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7. A composite aluminium panel in accordance with any one of claims 1 to 6, wherein the two parallel plates and/or sheets have been secured to the corrugated aluminium stiffener sheet by means of welding, and preferably by means of laser welding.
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8. A composite aluminium panel in accordance with any one of claims 1 to 7, wherein at least one of the two parallel plates and/or sheets are within the same compositional window as the corrugated aluminium stiffener.

5 9. A composite aluminium panel in accordance with claim 6 or 8, wherein a cladding of the AA4000-series aluminium alloy is present on at least one side of the surface of the corrugated aluminium stiffener sheet, and wherein at least one of the two parallel plates and/or sheets has been secured to the corrugated aluminium stiffener sheet by means of brazing.

10. Use of an aluminium rolled product of composition (in weight percent):

Mg 1.5 – 6.0

Mn 0.3 - 1.4

Zn 0.4 – 5.0

Fe up to 0.5

Si up to 0.5

Zr up to 0.30

optionally, one or more of	Cr	0.05 - 0.30
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Ti	0.01 – 0.20
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∇ 0.05 – 0.25

Ag 0.05 - 0.40

Cu/ up to 0.40

others up to 0.05 each, 0.15 total

Al balance

25 as corrugated aluminium stiffener sheet and/or as parallel sheet or plate in a composite aluminium panel in accordance with any one of claims 1 to 9.

11. Use of an aluminium rolled product of composition (in weight percent):

Mg 5.0 - 6.0

Mn 0.6 - 1.2

Zn 0.4 - 1.5, and preferably 0.4 - 0.9

Zr 0.05 - 0.25
Cr up to 0.3
Ti up to 0.2
Fe up to 0.5
Si up to 0.5
Cu up to 0.4
Ag up to 0.4

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balance Aluminium and inevitable impurities.

as corrugated aluminium stiffener sheet and/or as parallel sheet or plate in a composite aluminium panel in accordance with any one of claims 1 to 9.

12. A welded structure comprising at least one composite aluminium panel according to any one of claims 1 to 9.
13. A composite aluminium panel according to any one of claims 1 to 9 for ship building.
14. A composite aluminium panel according to any one of claims 1 to 9 for marine offshore construction.

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